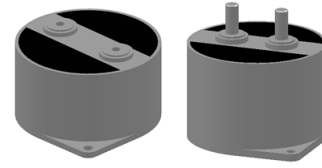


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High Irms Current DC Filter, DC-Link, Decoupling, Snubber

❖ General Description



Standard Reference	IEC 61071
Climatic Category	40 / 105 / 56
Max . Altitude	2000 m
Dielectric Material	Self-Healing Metallized Polypropylene
Case Type	Plastic Case, Resin filled, UL94V-0
Terminals Type	Male or Female screw terminals
Capacitance Range	Cn: 5µF ~ 2000µF (1kHz , 20°C)
Capacitance Tolerance	J (±5%), K(±10%)
Dielectric Dissipation Factor	tg δo : 0.0002 (1kHz , 20°C)
Insulation Resistance	IR × Cn : ≥10000s (100Vdc, 60s, 20°C)
Rated Voltage	Un : 300VDC ~ 3000VDC
Test voltage UTT	UTT: 1.5Un (10s , 20°C) –Test voltage between both terminals
Test voltage UTC	UTC: 4000Vac (10s , 20°C) –Test voltage between terminals with case
	1.1 × Un : 30% of on-load duration
	1.15 × Un : 30 min/day
Maximum Over Voltage	1.2 × Un : 5 min/day
	1.3 × Un : 1 min/day
	1.5 × Un : 30 ms/time, 1000 times during the life of the capacitor
	-40°C ~ +105°C (θhs ≤ 105°C)
Operating Temperature	50% linear voltage derating from θhs 85°C to 105°C
Storage Temperature	-40°C ~ +105°C
Lifetime Expectancy	100,000 hours (1.0Un , θhs ≤ 70°C)
Max. Torque of terminals	M6 Female screw: 4.5 Nm , M8 Male screw: 6.5 Nm
Max. Torque of installation	Installation hole(2-Φ5.5) : 3.5 Nm
Failure Rate Expectancy	≤ 100 FIT (1.0Un , θhs ≤ 70°C)
Installation	Any Position
Applications	Wind/Traction Inverter , EV/HEV Inverter , High frequency power
Remarks	RoHs Compliant on request. Add "R" to p/n.
	*Other capacitance, voltage and dimensions are available on request.

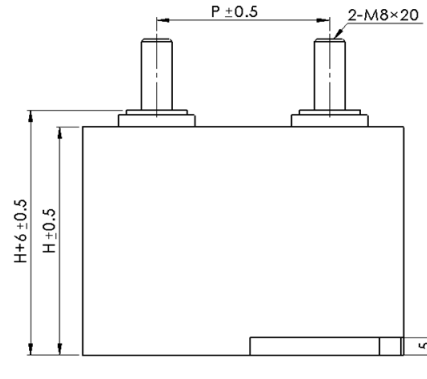
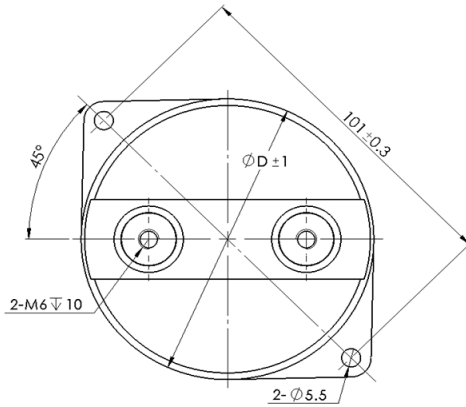
❖ Part Number System

EX: USM31-107K800B51

USM31	-	107	K	800	#	51
⋮		⋮	⋮	⋮	⋮	⋮
Series		Capacitance	Tolerance	Voltage	Style	H
		106=10.0µF	J=±5%	VDC	A= M8 Male	Height
		107=100.0µF	K=±10%		B=M6 Female	

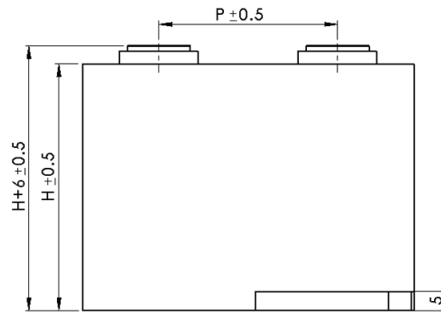
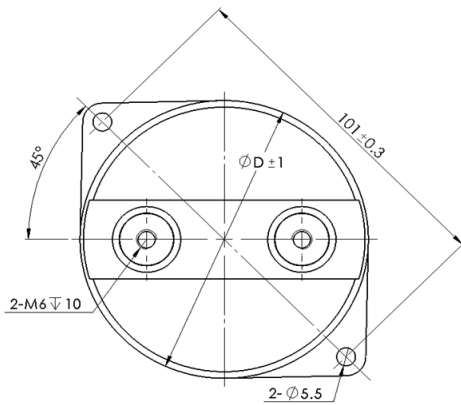
Style A : Male Screw (Output : M8)

Unit: mm



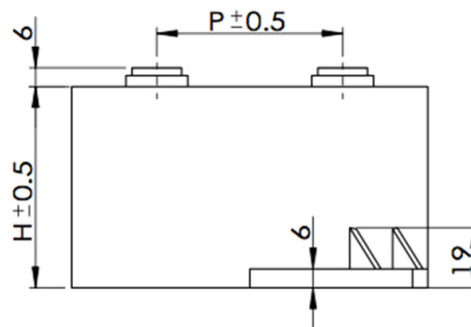
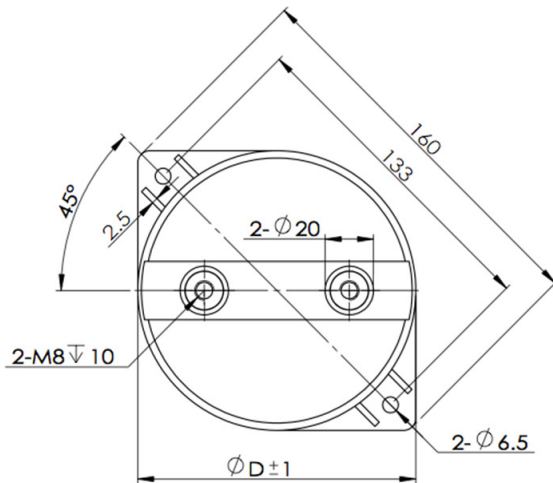
Style B: Female Screw (Output : M6)

Unit: mm



Style B: Female Screw (Output : M8)

Unit: mm



❖ **Electrical Characteristics**

USM31 Series

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Part Number	Cn	Un	UTT	UTC	ESL	ESR	Irms	dv/dt	I peak	Dimension (mm)		
	μF	Vdc	Vdc	Vac	nH	mΩ	Max.	V/μs	Amps	ΦD	H	P
Un : 450VDC												
USM31-187K450#40	180	450	675	4000	25	1.0	90A	22	3960	85	40	45
USM31-257K450#51	250	450	675	4000	35	0.6	100A	30	7500	85	51	45
USM31-357K450#65	350	450	675	4000	40	0.7	100A	20	7000	85	65	45
USM31-487K450#75	450	450	675	4000	45	0.6	100A	18	8100	85	75	45
USM31-687K450B64	680	450	675	4000	40	0.5	120A	20	13600	115	64	60
Un : 500VDC												
USM31-137K500#40	130	500	750	4000	25	1.0	88A	28	3640	85	40	45
USM31-187K500#51	180	500	750	4000	35	0.6	100A	35	6300	85	51	45
USM31-266K500#65	260	500	750	4000	40	0.7	100A	25	6500	85	65	45
USM31-337K500#75	330	500	750	4000	45	0.7	100A	22	7260	85	75	45
USM31-457K500B64	450	500	750	4000	40	0.5	120A	25	11250	115	64	60
Un : 600VDC												
USM31-107K600#40	100	600	900	4000	25	1.0	85A	30	3000	85	40	45
USM31-157K600#51	150	600	900	4000	35	0.6	100A	40	6000	85	51	45
USM31-227K600#65	220	600	900	4000	40	0.7	100A	28	6160	85	65	45
USM31-287K600#75	280	600	900	4000	45	0.7	100A	23	6440	85	75	45
USM31-407K600B64	400	600	900	4000	40	0.5	120A	28	11200	115	64	60
Un : 800VDC												
USM31-686K800#40	68	800	1200	4000	25	1.2	80A	38	2584	85	40	45
USM31-107K800#51	100	800	1200	4000	35	0.7	100A	50	5000	85	51	45
USM31-147K800#65	140	800	1200	4000	40	0.8	100A	38	5320	85	65	45
USM31-187K800#75	180	800	1200	4000	45	0.8	100A	28	5040	85	75	45
USM31-257K800B64	250	800	1200	4000	40	0.6	120A	38	9500	115	64	60
Un : 1000VDC												
USM31-456K1000#40	45	1000	1500	4000	25	1.3	75A	45	2025	85	40	45
USM31-606K1000#51	60	1000	1500	4000	35	0.7	90A	60	3600	85	51	45
USM31-906K1000#65	90	1000	1500	4000	40	0.8	90A	45	4050	85	65	45
USM31-127K1000#75	120	1000	1500	4000	45	0.8	90A	35	4200	85	75	45
USM31-167K1000B64	160	1000	1500	4000	40	0.6	110A	45	7200	115	64	60
Un : 1200VDC												
USM31-256K1200#40	25	1200	1800	4000	25	1.5	70A	60	1500	85	40	45
USM31-306K1200#51	30	1200	1800	4000	35	0.8	85A	80	2400	85	51	45
USM31-456K1200#65	45	1200	1800	4000	40	0.9	85A	60	2700	85	65	45
USM31-606K1200#75	60	1200	1800	4000	45	1.0	85A	45	2700	85	75	45
USM31-906K1200B64	90	1200	1800	4000	40	0.7	100A	60	5400	115	64	60

*Other capacitance, voltage and dimensions are available on request.

ΔVersion: 2016-1.0